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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/990,966

11/16/2001

Andreas Himmler

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07/23/2002

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EXAMINER

VALENCIA, DANIEL E

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 07/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/990,966

Applicant(s)

HIMMLER, ANDREAS

Examiner

Daniel E Valencia

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on <sup>16 November 2001</sup> ~~26 March 2002~~ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Fantone U.S. Patent No. 4,540,246. Refer to appropriate drawings or parts of the specification. Fantone discloses a holographic optical apparatus for use with expanded-beam type fiber optical components with all the limitations of the abovementioned claims. Regarding claim 1, Fantone discloses that his device (see fig 7 and 8) uses a reflector to redirect part of a coherent light beam into the entry face of a waveguide (see col. 8, lines 45-49), such that an interference pattern is produced (see col. 8, line 65). Fantone further discloses that the reflector has a planar pattern, and is arranged asymmetrically with respect to the optical axis, as described by instant claim 3. Referring to claim 4, Fantone discloses that the planar pattern could be holographic (col. 7, lines 62-66). Although Fantone does not disclose that his device is used for exciting different modes in the waveguide, it would be inherent that various modes would be excited in the waveguide due to the interfering light beams produced by the device.

Claims 1, 2, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook U.S. Patent No. 5,629,998. Refer to appropriate drawings or parts of the specification. Cook

discloses a method and apparatus for writing photosensitive grating using Lloyd's mirror with all of the limitations of the abovementioned claims. Regarding claim 1, Cook discloses that his device (see fig 1) uses a mirror (ref 14) to deflect a part of a coherent beam of light onto an entry face such that an interference pattern is formed (see col. 2, lines 15-25). Cook further discloses that the reflector is a planar mirror (see fig 1), as mentioned by instant claim 2. Referring to claim 5, Cook further discloses that the light source lies on an optical axis of an optical waveguide and the reflector surrounds a space between the light source and the entry face (see fig 1). Cook further discloses that the inside of the reflector is mirrored, as described by instant claim 7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook U.S. Patent No. 5,629,998 in view of Fantone U.S. Patent No. 4,540,246. Refer to appropriate drawings or parts of the specification. Cook as applied above, discloses a device with a majority of the claimed limitations with the exception of reflector having the pattern.

On the other hand, Fantone discloses a patterned reflector as part of his device, such as the one described in instant claim 8. Fantone teaches that it is advantageous to use a holographic pattern on a reflector for causing light interference, because it directs the output light in a preferred way (see col. 8, lines 7-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a patterned reflector to cause interference in a device like the one disclosed by Cook.

#### *Allowable Subject Matter*

Claims 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 6, the prior art of record, taken alone or in combination, fails to disclose or render obvious a device for exciting modes, wherein the reflector is a cone envelope which encloses the space between the light source and the entry face in combination with the limitations of claims 1 and 5.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bhagavatula U.S. Patent No. 6,046,854 discloses a multi-path interference filter with reflective surfaces.

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Straayer U.S. Patent No. 6,084,998 discloses a system and method for fabricating distributed Bragg reflectors with preferred properties.


Pellaux U.S. Patent No. 4,310,216 discloses a process for manufacturing a device for coupling at least two light conductors and a coupling device according to this process.

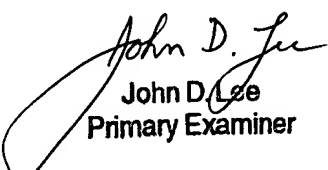
Winston U.S. Patent Application Publication 2002/0061178 A1 discloses a luminaire device

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E Valencia whose telephone number is (703)-305-4399. The examiner can normally be reached on Monday-Friday 9:30-6:00.

The fax phone numbers for the organization where this application or proceeding is assigned are (703)-308-7724 for regular communications and (703)-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

  
Dan Valencia  
July 16, 2002

  
John D. Lee  
Primary Examiner